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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,032	07/30/2001	Alexander Tormasov	2230.0390001/MBR/GSB	1026
54089	7590	12/15/2006	EXAMINER	
BARDMESSER LAW GROUP, P.C. 910 17TH STREET, N.W. SUITE 800 WASHINGTON, DC 20006			TRAN, NGHI V	
			ART UNIT	PAPER NUMBER
			2151	

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,032

Applicant(s)

TORMASOV ET AL.

Examiner

Nghi V. Tran

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/07/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-28,30-43,45,46,48-50,52-55,57-61 and 63-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-28,30-43,45,46,48-50,52-55,57-61 and 63-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed on September 07, 2006. Claims 26, 33, 45, 57, 66, and 69-70 have been amended. Claims 1-25, 29, 44, 47, 51, 56, and 62 have been canceled. Claims 71-74 have been added. Therefore, claims 26-28, 30-43, 45-46, 48-50, 52-55, 57-61, and 63-74 are presented for further examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 07, 2006 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2151

4. Claims 26-28, 30-43, 45-46, 48-50, 52-55, 57-61, and 63-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sim, United States Patent Application Publication Number 2002/0083118 (hereinafter Sim), in view of Fredrickson et al., United States Patent Application Publication Number 2003/0115251 (hereinafter Fredrickson).

5. With respect to claims 26, 33, 45, 57, 66, 69-70, and 74, Sim teaches a system for distributed file storage [see abstract and fig.7] comprising:

- a plurality of servers [i.e. application servers **721**, **722**, **723**, and/or **724**] providing, to a plurality of clients [i.e. a plurality of End-User Client (EUC) systems **550**], file access services for accessing files stored on the plurality of servers [paragraphs 0076-0078]; and
- a list of neighbor servers maintained by each server [paragraphs 0112-0118],
- wherein each file [i.e. a large payload file] is stored in the form of a plurality of N pieces [i.e. divided into blocks] on N servers, the N pieces being generated from the file [paragraphs 0088-0094],
- wherein the list is used to obtain information for reconstructing files stored on the neighbor servers, such that any K out of the N pieces can be used to reconstruct any file [paragraphs 0095-0096],
- wherein a server [i.e. application servers **721**, **722**, **723**, and/or **724**] belonging to more than one group [paragraph 0022] acts as a boundary

server [i.e. distribution server **703** and/or boundary represents the edge of the network **300**, see paragraph 0018-0022],

- wherein boundary servers are used to transfer pieces of the file to servers of groups other than a group [paragraph 0144] to which a client has connected [fig.7].

However, Sim does not explicitly show wherein the neighbor servers are grouped as a subset of the plurality of servers.

In a distributed file storage system, Fredrickson discloses or suggests wherein the neighbor servers [i.e. the neighbor nodes **56**] are grouped as a subset of the plurality of servers [i.e. grouping the neighbor nodes in group of fifty, paragraphs 0156].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sim in view of Fredrickson by grouping the neighbor servers as a subset of the plurality of servers because this feature provides scalability with the hybrid approach, wherein data storage can inherently and flexibly grow or shrink as peer users enter and exit the system with the resources of their nodes [Fredrickson, paragraph 0054]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order determine the optimal method to retrieve the data object [Fredrickson, paragraph 0106].

6. With respect to claims 27, 34, 46, and 58, Sim further teaches wherein the servers use a peer-to-peer network [paragraphs 0003 and 0144].

Art Unit: 2151

7. With respect to claims 28, 35, Sim further teaches wherein the files are stored using a peer-to-peer network [paragraphs 0003 and 0144].

8. With respect to claim 30, Sim further teaches wherein at least one of the servers is a logical server [i.e. Virtual File Control System **702**] that includes a plurality of physical servers connected via a network [fig.7].

9. With respect to claim 31, Sim does not explicitly show wherein each server belongs to a group defined by its corresponding list, wherein a server that belongs to multiple groups maintains corresponding multiple lists for each group to which it belongs, and wherein, upon receiving a request for a file, the server distributes the request to each of the multiple groups.

In a distributed file storage system, Fredrickson discloses or suggests wherein each server belongs to a group defined by its corresponding list, wherein a server that belongs to multiple groups maintains corresponding multiple lists for each group to which it belongs, and wherein, upon receiving a request for a file, the server distributes the request to each of the multiple groups [i.e. grouping the neighbor nodes in group of fifty, paragraphs 0156].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sim in view of Fredrickson by maintaining corresponding multiple list for each group to which it belongs because this feature provides scalability with the hybrid approach, wherein data storage can inherently and

flexibly grow or shrink as peer users enter and exit the system with the resources of their nodes [Fredrickson, paragraph 0054]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order determine the optimal method to retrieve the data object [Fredrickson, paragraph 0106].

10. With respect to claim 32, Sim further teaches wherein none of the pieces is unique [paragraphs 0088-0094].

11. With respect to claim 71, Sim further teaches wherein the servers are organized into a plurality of groups [paragraph 0144] such that server-to-server response time between any two servers of the same group does not exceed a predetermined limit [i.e. safety threshold, see paragraph 0193 and 0195], and wherein, when a new server is connected to one of the groups [fig.7], the new server uses information of the boundary servers to connect to a group so as to have optimal server-to-server response time to its neighbors within its group [paragraphs 0182, 0193-0206].

12. With respect to claims 72 and 73, Sim does not explicitly show wherein, when one server is disconnected from the system, the remaining servers use information of the boundary servers to reconfigure their groups so as to have optimal server-to-server response times to their neighbors with their groups.

In a distributed file storage system, Fredrickson discloses or suggests wherein, when one server is disconnected from the system, the remaining servers use

Art Unit: 2151

information of the boundary servers to reconfigure their groups so as to have optimal server-to-server response times to their neighbors with their groups [paragraphs 0170-0182].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sim in view of Fredrickson by reconfiguring their groups so as to have optimal server-to-server when one server is disconnected from the system because this feature provides scalability with the hybrid approach, wherein data storage can inherently and flexibly grow or shrink as peer users enter and exit the system with the resources of their nodes [Fredrickson, paragraph 0054]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order determine the optimal method to retrieve the data object [Fredrickson, paragraph 0106].

13. With respect to claims 36, 43, 48, and 59, Sim further teaches maintaining functional equivalence among the servers [paragraphs 0112-0118].

14. With respect to claims 37, 49, and 60, Sim further teaches verifying availability of the neighbor servers [paragraphs 0112-0118].

15. With respect to claims 38-41, 50, 52-54, 61, 63-65, and 67, Sim further teaches wherein the list is a dynamic list, and further comprising: polling the servers on the dynamic list of the neighbor servers [i.e. VFCS polls the File Metadata Database,

Art Unit: 2151

paragraph 0253 and see table 2] and measuring a network distance for each server [paragraphs 0029 and 0120]; keeping each available server on the dynamic list in the same group [i.e. populated dynamically, paragraphs 0237, 2050, 0258, and/or 0286]; and switching [i.e. load balancing, fig.17] at least one server of the plurality of servers into a neighbor group of servers if the measured network distance is lower than a predetermined threshold [i.e. safety threshold, see paragraph 0193 and 0195].

16. With respect to claims 42, 55, and 68, Sim further teaches wherein the list is a static list of servers [i.e. the list of application servers **721-724**, fig.7].

Response to Arguments

17. Applicant's arguments with respect to claims 26-28, 30-43, 45-46, 48-50, 52-55, and 57-74 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. "System for customized electronic identification of desirable objects," by Herz, United States Patent Number 6,029,195.

b. "Compilation of fractional media clips," United States Patent Application Publication Number 2003/0014419.

Art Unit: 2151

c. "Method and application for a reactive defense against illegal distribution of multimedia content in file sharing networks," by Peled et al., United States Patent Application Publication Number 2002/0087885.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi V. Tran whose telephone number is (571) 272-4067. The examiner can normally be reached on Monday-Thursday and every other Friday (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi Tran


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER